

F. L. BAILEY.
Inking Apparatus.

No. 143,489.

Patented Oct. 7, 1873.

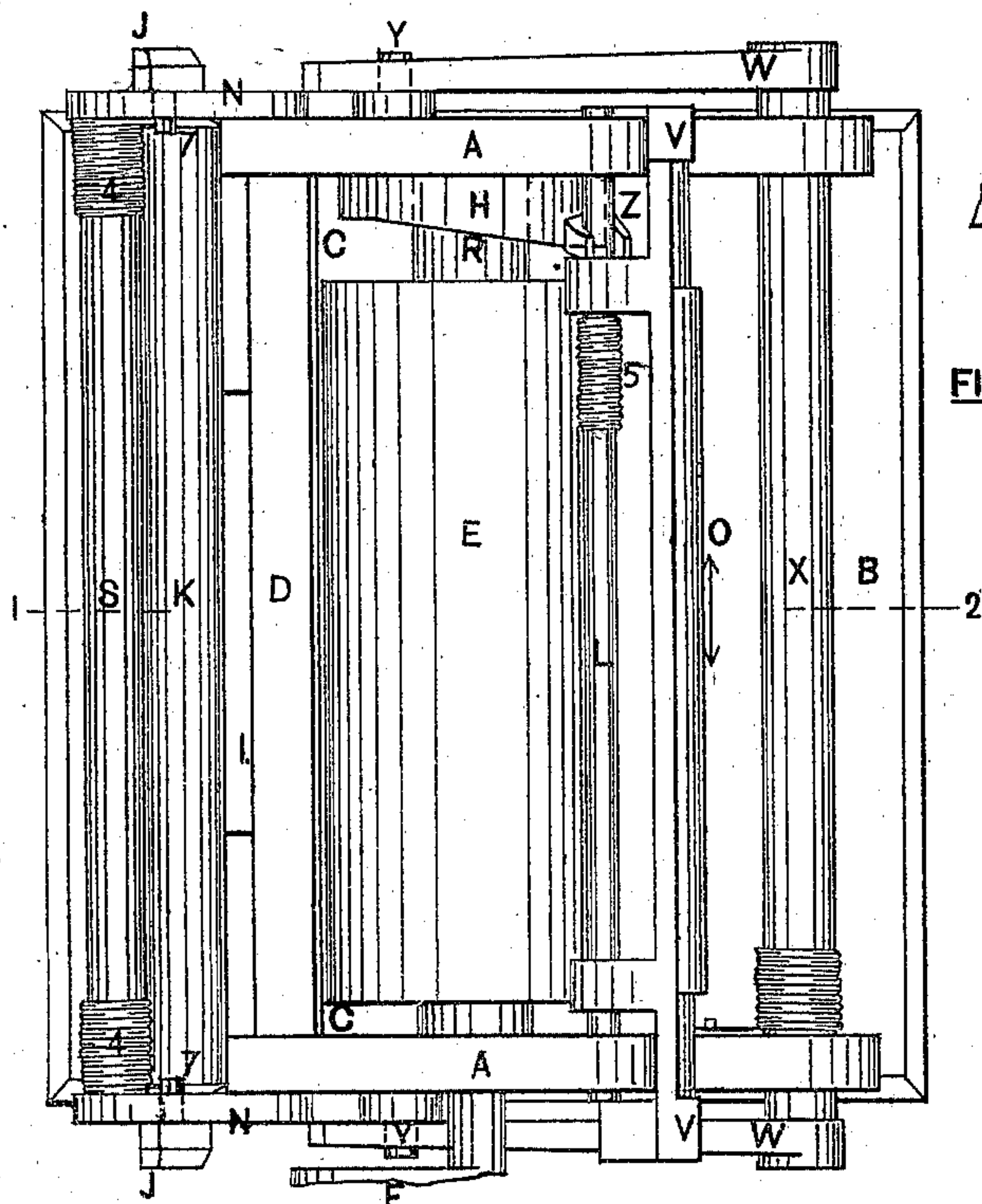
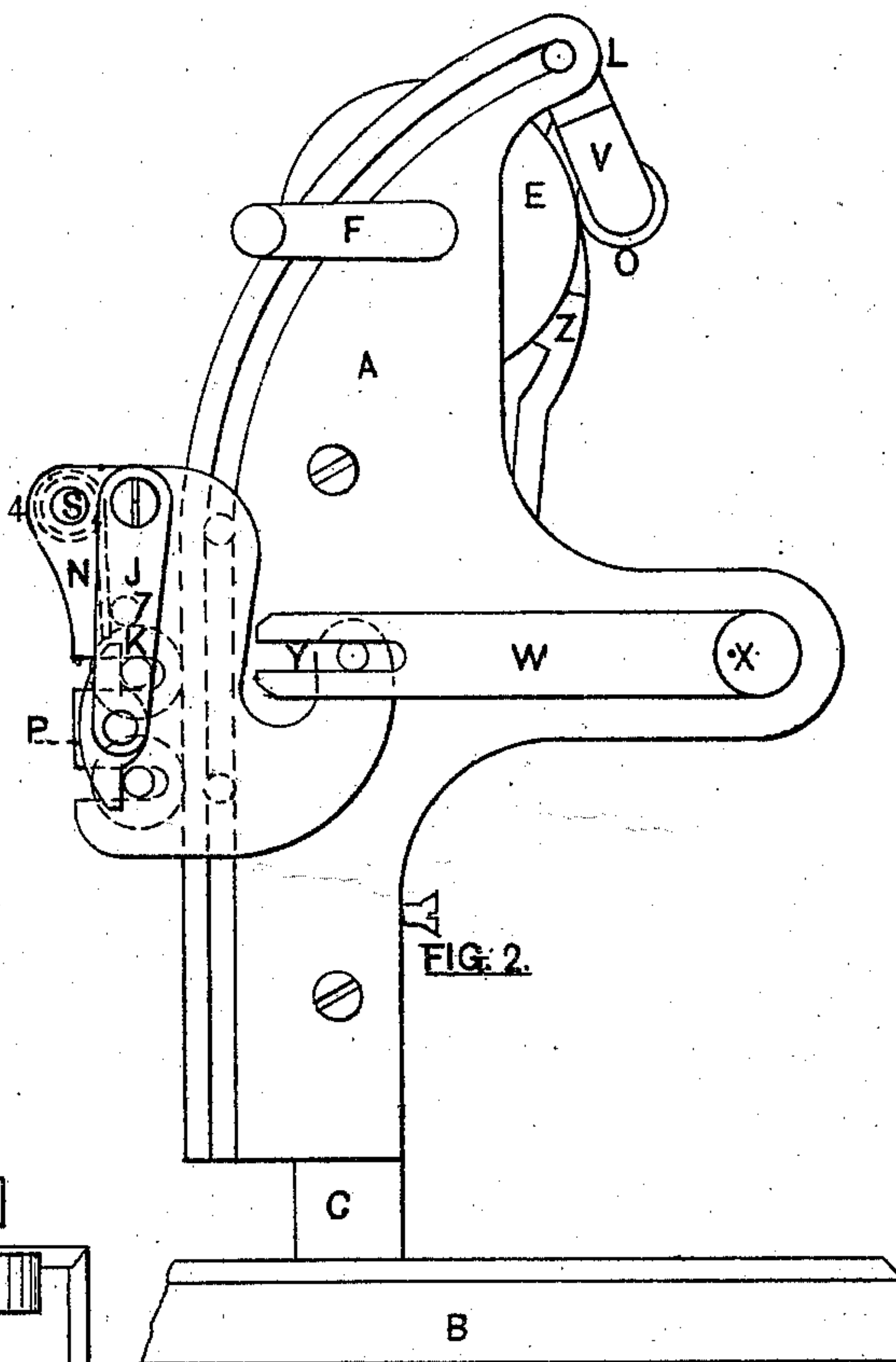
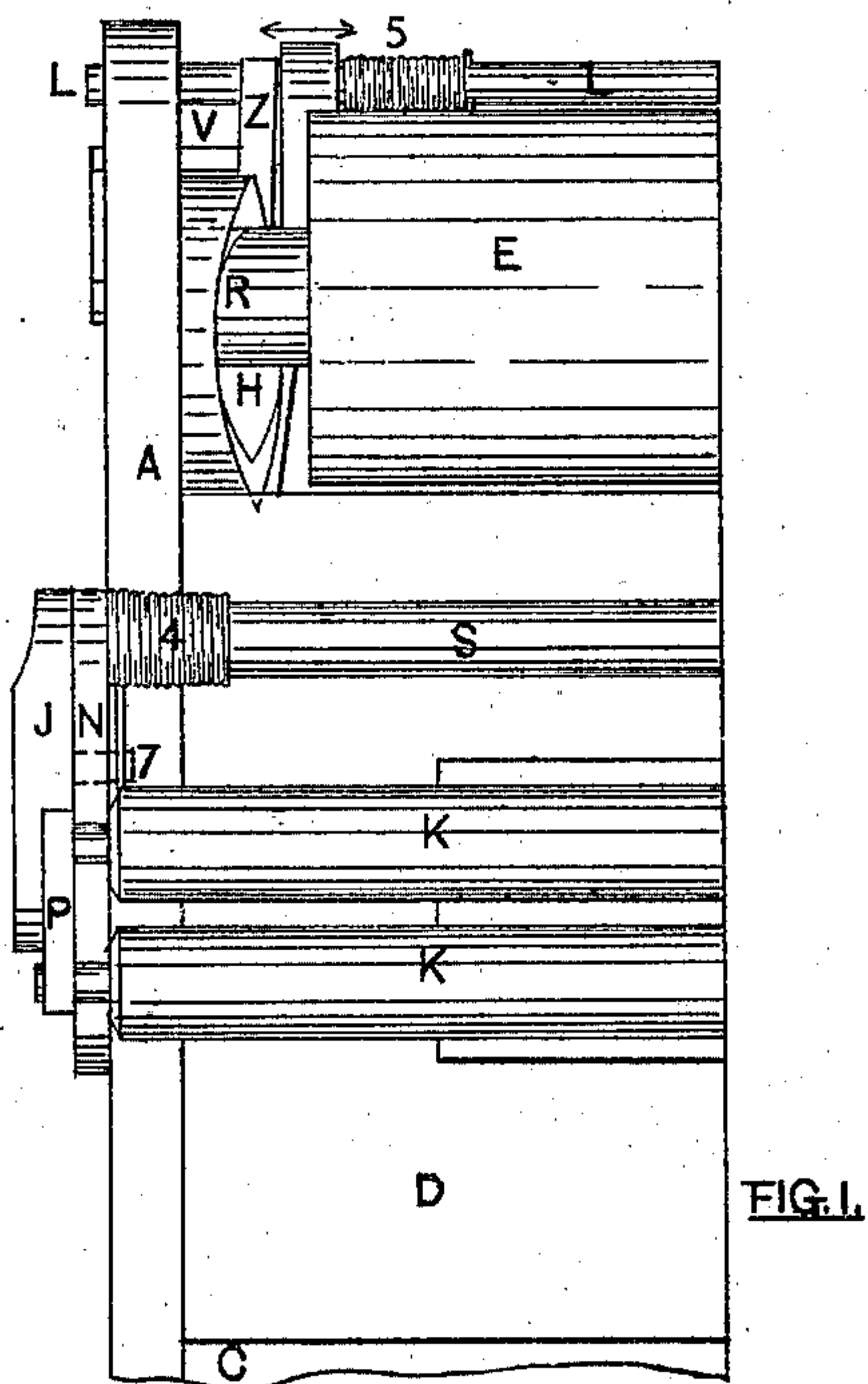


FIG. 3.

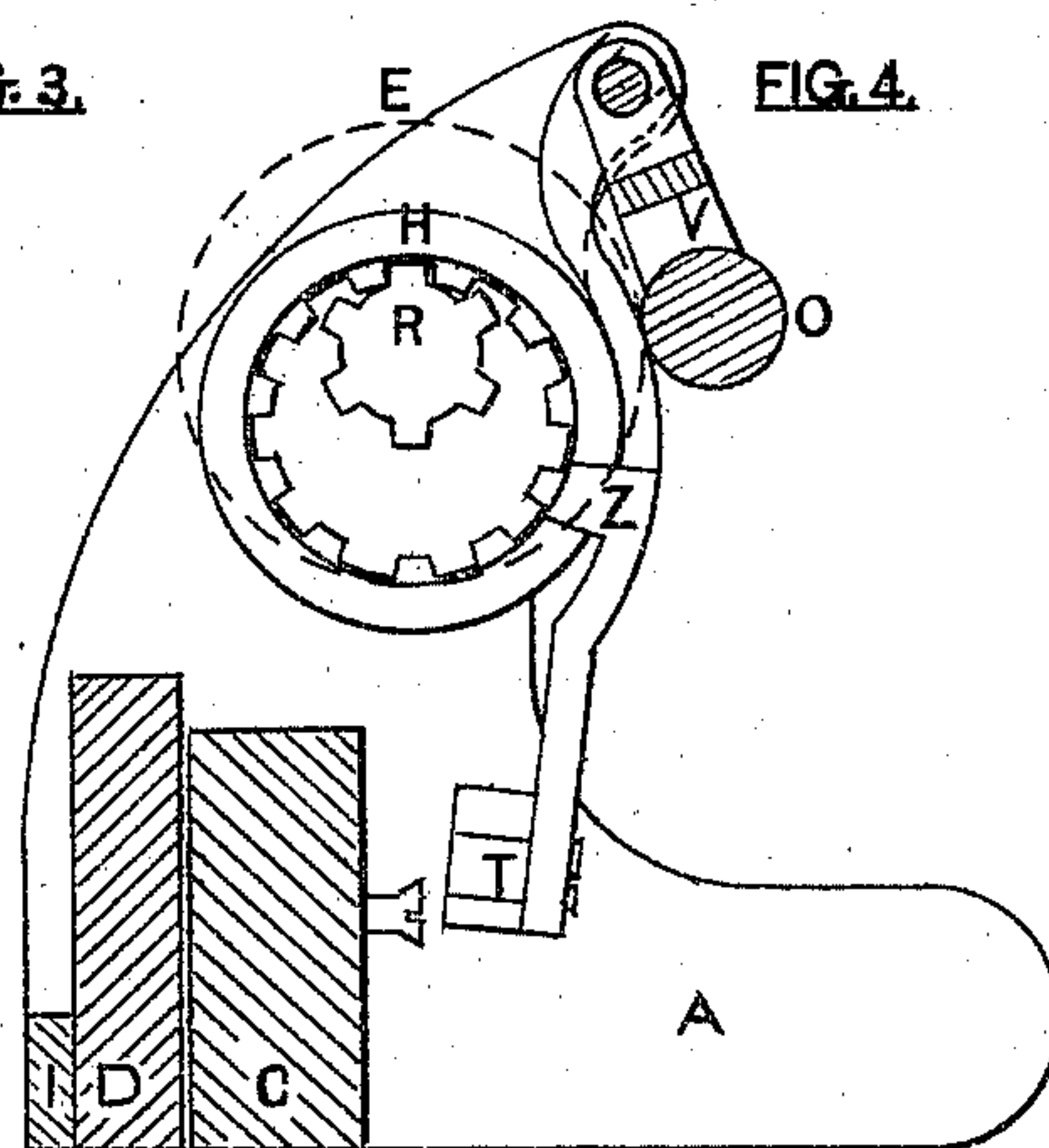


FIG. 4.

WITNESSES.

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FRANKLIN L. BAILEY, OF BOSTON, ASSIGNOR TO JOSEPH WATSON, OF
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IMPROVEMENT IN INKING APPARATUS.

Specification forming part of Letters Patent No. 143,489, dated October 7, 1873; application filed
July 7, 1873.

To all whom it may concern:

Be it known that I, FRANKLIN L. BAILEY, of Boston, in the county of Suffolk, in the State of Massachusetts, have invented some new and useful Improvements in Printing-Presses; and that the following is a description of the same, which, with the drawings, is sufficient to enable those acquainted with the art to construct and operate the same.

My invention consists in the peculiar means employed to move an ink-distributing roller laterally upon the ink-cylinder, for the purpose of spreading the ink evenly, the frame which holds the roller being moved in one direction by the force of a spring pressing against it, and in the opposite by a vibrating lever, which receives its motion from a cam made upon the surface of a ring or inside gear, which surrounds a pinion fastened to the shaft of the ink-cylinder; one of the valuable results of this arrangement of parts being that the ring with the teeth on it, making it an inside gear, and the same ring with its cam-shaped surface making it a cam, which receives its motion from the pinion, and imparts motion to vibrating lever or its equivalent, can be placed around the cylinder-shaft in a space which is not, usually, of any use in printing-presses, and out of the way of other moving parts. At the same time the whole arrangement is more simple, easily made, and more durable, than other means for the same purpose.

In the drawings, it will be seen that Figure 1 is a front view of the left side of the press from the vertical section line 1 2. Fig. 2 is a view of the right side of the press. Fig. 3 is a top view or plan; and Fig. 4 is a detached section of the frame, looking on the inside of the left side of the press, showing the relative position of the ink-cylinder, pinion, inside gear, and vibrating lever, and roller-frame.

A A are the sides of the frame, which, with the cross-beam and support C C, standing upon a base, B, being firmly fixed together, support all the movable parts of the press.

As my improvements relate wholly to the inking arrangements, most of the other common and well-known parts are excluded from the drawings and description.

D D is an adjustable vertical bed, having

upon its front face the form of type I, with the face of the type even with the inside surface of the rollers K K, which supply it with ink as the carriage N N is moved down or up by the hand or other means. This carriage, by the studs on it, follows the grooves in the outside and edge of the frame-sides A A. The carriage-plates N N are connected by and secured to the cross-rod S, these three parts constituting the roller-carriage. The bearings of the type-rollers rest in slots in the opposite plates, and, passing through, are held in position by their outer ends passing under the yokes P P on the hinged levers J J, and the rollers made to press and roll against the frame A A and the face of the type. These levers with their yokes are swung inwardly by the tension of the projecting ends of the springs 4 4, wound around the ends of the cross-rod S, these projecting ends bearing on studs 7 7 of the levers, reaching through the carriage-plates for that purpose. The carriage, by studs on its outside, rests on slots Y in the two long arms W W, attached to and moving with the shaft X, at a point in the frame nearly in the center of the whole movement of the carriage, the tension of the spring wound around one end of the shaft X being made to counterbalance the weight of the roller-carriage.

In Figs. 1, 2, and 3, and dotted in position in Fig. 4, is the ink-distributing cylinder, having proper bearings in the press-sides. From this cylinder the type-rollers K K take their supply of ink. On the back side of the cylinder is the lateral distributing-roller O, which is held against the ink-cylinder E by its own weight and that of its frame V, this frame being hung on the stationary rod L, which reaches from one side of the press-frame to the other, alongside of and a little above the ink-cylinder. The frame V is pushed laterally in one direction by a spiral spring wound around its rod, and in the opposite by the upper end of the vibrating lever Z, pivoted in its lower end to the press-frame at T. At a point midway of its length, the lever Z receives its motion, against the tension of the spring, by bearing against and following the surface of the cam on the face of the ring H. This ring also, having teeth upon its inside di-

ameter, and being in that sense an inside gear, surrounds and joins the pinion R upon the cylinder-shaft, and receives from that its motion around a stud cast on the press-frame, which stud is eccentric with and partly incloses the pinion. The surface of the ring H opposite the cam, being plane, bears and revolves against the flat surface of the press-frame.

If the number of teeth in the ring H is not divided by that of the pinion R without remainder—if it is not a multiple of that of the pinion—the roller O will constantly assume

new positions with reference to the regular motion of the cylinder and type-rollers, thereby dividing the ink more successfully.

I claim—

The combination, for the purpose described, of the cylinder E, roller O, frame V, its rod and spring L, the lever Z, the gear-ring H with its cam, and the pinion R.

FRANKLIN L. BAILEY.

Witnesses:

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WILLIAM P. FOWLER.